

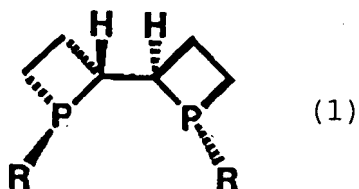
Application No.: 10/564,984
Amendment under 37 CFR 1.111
Reply to Office Action dated January 30, 2007
June 7, 2007

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Currently amended): An optically active diphosphetane compound represented by formula (1):

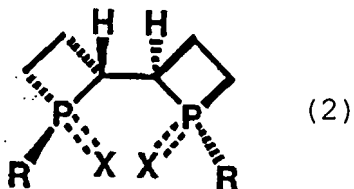
~~{Chem. 1}~~



(wherein R represents a linear ~~[[,]]~~ or a branched, ~~or cyclic~~ alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms).

Claim 2 (Currently amended): A diphosphetane compound represented by formula (2):

~~{Chem. 2}~~

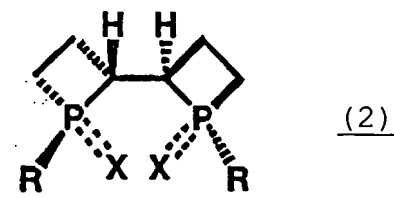


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(wherein R represents ~~the same as the above~~ a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms, X represents a boron trihydride group, an oxygen atom, or a sulfur atom, and === represents a single bond when X is a boron trihydride group or a double bond when X is an oxygen atom or sulfur atom).

Claim 3 (Currently amended): A phosphetane compound used as an intermediate ~~for producing the compound according to claim 2~~ of a diphosphetane compound,

the diphosphetane compound represented by formula (2):

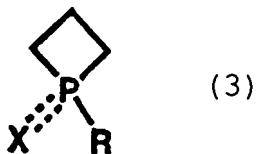


(wherein R represents a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms, X represents a boron trihydride group, an oxygen atom, or a sulfur atom, and === represents a single bond when X is a boron trihydride group or a double bond when X is an oxygen atom or sulfur atom); and

the phosphetane compound being represented by formula (3):

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~~{Chem. 3}~~



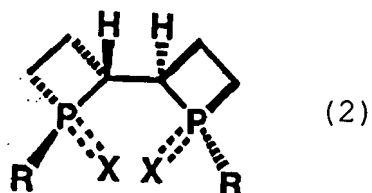
(wherein R, X, and ~~==~~ represent the same as the above represents a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms, X represents a boron trihydride group, an oxygen atom, or a sulfur atom, and ~~==~~ represents a single bond when X is a boron trihydride group or a double bond when X is an oxygen atom or sulfur atom).

Claim 4 (Currently amended): ~~A transition metal complex comprising the~~ The optically active diphosphetane compound according to claim 1, wherein the optically active diphosphetane compound is in a transition metal complex as a ligand.

Please add the following new claims 5-7 as follows:

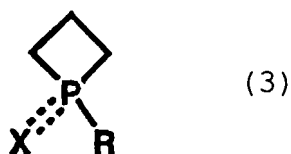
Claim 5 (New): A phosphetane compound used as an intermediate of a diphosphetane compound,
the diphosphetane compound represented by formula (2):

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(wherein R represents a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms, X represents a boron trihydride group, an oxygen atom, or a sulfur atom, and == represents a single bond when X is a boron trihydride group or a double bond when X is an oxygen atom or sulfur atom);

the phosphetane compound being represented by formula (3):

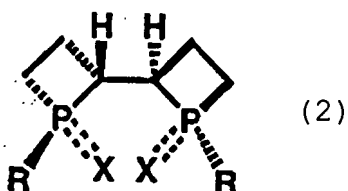


(wherein R represents a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms, X represents a boron trihydride group, an oxygen atom, or a sulfur atom, and == represents a single bond when X is a boron trihydride group or a double bond when X is an oxygen atom or sulfur atom); and

wherein the phosphetane compound represented by formula (3) is 1-boranato-1-tert-butyl-phosphetane.

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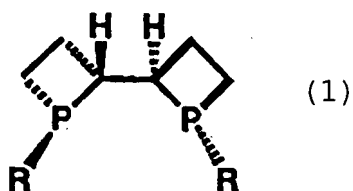
Claim 6 (New): A diphosphetane compound represented by
 formula (2):



(wherein R represents a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms, X represents a boron trihydride group, an oxygen atom, or a sulfur atom, and == represents a single bond when X is a boron trihydride group or a double bond when X is an oxygen atom or sulfur atom); and

wherein the diphosphetane compound represented by formula (2) is (1S, 1S', 2R, 2R')-1,1'-diboranato-1,1'-di-tert-butyl-[2,2']-diphosphetane.

Claim 7 (New): An optically active diphosphetane compound represented by formula (1):



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(wherein R represents a linear or a branched alkyl group having 2 to 20 carbon atoms or a cyclic alkyl group having 3 to 20 carbon atoms);

wherein the optically active diphosphetane compound is comprised in a transition metal complex as a ligand; and

wherein the transition metal complex is one of [rhodium (I) ((1S, 1S', 2R, 2R')-1,1'-di-tert-butyl-[2, 2']-diphosphetane)(norbornadiene)] tetrafluoroborate or [rhodium (I) ((1S, 1S', 2R, 2R')-1,1'-di-tert-butyl-[2, 2']-diphosphetane)(norbornadiene)] hexafluorophosphate.